

Work Order ID 153528

Monday, November 21, 2016 9:24:07 AM

153528

Page 1

Item ID: D3319-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Forward Wearplate

Start Date: 11/9/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/21/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: DAS 21 Date: NOV 21 2016 Tooling: _____ Date: _____
QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3319	C
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100

0.01

100

Waterjet

FLOW WATER JET

Memo

0.15

FLOW CNC Waterjet

1-Cut as per Dwg D3319

Dwg Rev: CProg Rev: C

2-Deburr if necessary

(12)

DC 11/11/24

110

0.00

110

QC

QC2- Inspect parts off machine FAI/FAIB

Memo

0.02

Quality Control

(12)

DC 11/11/24

120

0.00

120

QC

QC8- Inspect parts - second check

Memo

0.03

Quality Control

12

DAS
38
8-89
NOV 25 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Description Work Order Deviation				Disposition			Completed By																		
							Lead hand / Supervisor Approval Verification																		
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Design ☐		Operator ☐		Bending ☐		Set-up ☐		Folio/Program ☐		Outside Dimensions ☐															
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Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐		Wrong Stock Pulled ☐		Part Lost/Missing ☐															
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Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐		Off-set ☐		Drawing ☐															
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Page 2

Item ID: D3319-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Forward Wearplate
Start Date: 11/9/2016 Start Qty: 10.00 ***10*** Cust Item ID:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* Brake NC Brake NC	NC BRAKE Memo 1- Form using DT8326 & DT8261 as per Dwg D3319Rev: <u>C</u> 2- Form flat on press using DT8776 block	0.01 0.08				DAS 30 9-89 (12)			NOV 28 2016
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.03				12			DAS 38 9-89 NOV 28 2016
160 *160* Large Fab Large Fab	Weld per dwg A/R Hardcoat steel Batch: <u>M135425</u> Large Fab Memo 1- Layout weld location as per Dwg D3319 using jig D3319-1T3 2- Weld hard surface using DT8755 per QSI 004 and Dwg D3319 Rev: <u>C</u> Qty Part Number Description Batch A/R N/A 228/7560 Hardcoat Rod <u>M135425</u>	0.00 0.32				(12)		DYC 16/12/01	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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153528

Monday, November 21, 2016 9:24:07 AM

N900040100

Setup Start *NS1*

Stop ***NS2***

10

Start Date: 11/9/2016 **Start Qty:** 10.00

Required Date: 11/21/2016 **Req'd Qty:** 10.00

Customer:

10

Run Start *NR1*

Stop ***NR2***

DAS
18
9-29

0.00

170

0.00

12 $\emptyset$ 1672-06

0.00

180

0.03

⑪ 16.12.21

0.00

190

0.00

9:02 AM

320

9:37 AM

12 ϕ 16-12-02. DAS 34 9.89
BEB

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 4

Item ID: D3319-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Forward Wearplate
Start Date: 11/9/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 11/21/2016 Req'd Qty: 10.00 ***10*** Customer:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC3- Inspect Part Finish	0.00							
200									
QC	Memo	0.02							
Quality Control									DAS 9 9-89
210	Identify as per dwg & Stock Location: <u>ST 603</u>	0.00							
210	Packaging								
Packaging	Memo	0.02							
Packaging	Identify on inside surface using a permanent fine point marker with the following: TCCA-PDA, Dart Aerospace Ltd. P/N: D3319-1, B/N: BXXXXXX For Product Eligibility see PDA05-18 and Stock Location: _____								(12) MF 16-12-08
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.17							
Quality Control									DAS 21 9-89 DEC 12 2016 MF 16-12-08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, November 21, 2016 9:24:07 AM

Work Order ID: 153528

153528

Parent Item: D3319-1

D3319-1

Parent Item Name: Forward Wearplate

Start Date: 11/9/2016

Required Date: 11/21/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP: B05.10.14 Added step 9, dwg rev B KJ/EC
IPP Rev: C Now on Waterjet 06-10-26 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M1010S18GA		Purchased		No		100	sf	54.9500	0.628	6.610526			

M1010S18GA

1010/1025 SHEET .048

DC 11/21/24

Location

Loc Qty

Loc Code

MAT019

54.949952

m132886

10.45

m134083

2

m135612

5

m136036

37.5

7.5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>					Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																			
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Large Fab ☐	Composite ☐	Supplier ☐																				
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition																				
					Completed By																	
					Lead hand / Supervisor Approval Verification																	
					QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																				
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
OTHER :																						

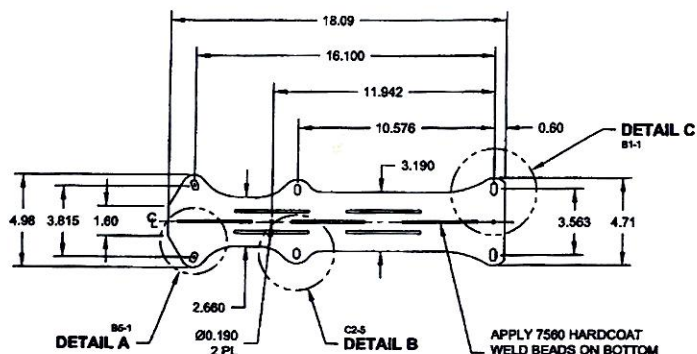
DART AEROSPACE LTD		Work Order:	153528
Description: Wearplate		Part Number:	D3319-1
Inspection Dwg: D3319	Rev: C	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

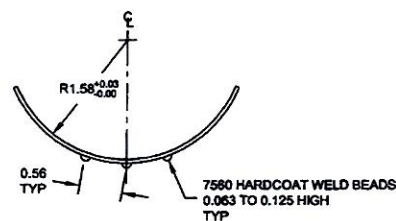
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.98	+/-0.030	4.981	1		V: 0.01	
1.60	+/-0.030	1.60	1			
2.660	+/-0.010	2.669	1			
3.190	+/-0.010	3.199	1			
3.563	+/-0.010	3.556	1			
4.71	+/-0.030	4.713	1			
0.60	+/-0.030	0.603	1			
10.576	+/-0.010	10.568	1			
11.942	+/-0.010	11.936	1			
18.09	+/-0.030	18.09	1			
Ø0.316 x 0.546	+0.006/-0.001 x +/-0.010	Ø0.315 x 0.545	1			
Ø0.316 x 0.670	+0.006/-0.001 x +/-0.010	Ø0.315 x 0.669	1			
Ø0.190	+0.005/-0.001	Ø0.190	1			
3.815	+/-0.010	3.810	1			
16.100	+/-0.010	16.100	1			

Measured by:	pc	Audited by:	DAS 38	Preliminary Approval:	
Date:	16/11/24	Date:	NOV 25 2016	Date:	

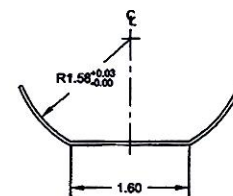
Rev	Date	Change	Revised by	Approved
A	07.05.31	New Issue	KJ/JLM	
B	12.05.15	Dimensions updated per Dwg Rev C	KJ	



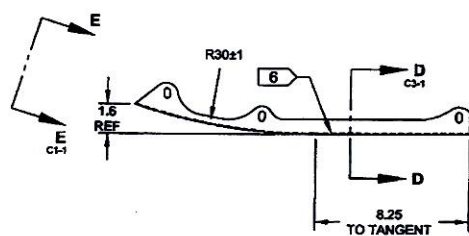
D3319-1F FLAT PATTERN



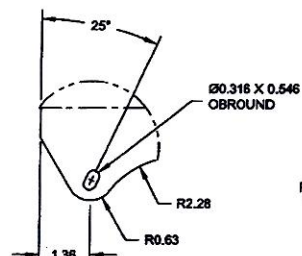
SECTION D-D
SCALE 4X



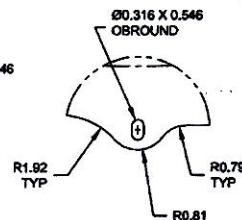
SECTION E-E
SCALE 4X



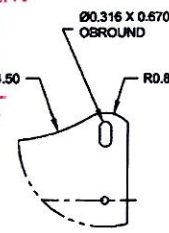
D3319-1 BENDING DETAIL
MAKE FROM D3319-1F



DETAIL A
SCALE 4X



DETAIL B
SCALE 4X



DETAIL C
SCALE 4X

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 153528
ML5
1611-21

D3319-1 WEARPLATE

NOTES:

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A1008 OR CSA G40-21, 38W/44W/50W/60W/70W SERIES STEEL 18 GAUGE (0.048 THICK)
REF. DART SPEC. M1010-S18GA
- 2) FINISH: POWDER COAT GREY SANDEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 016 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY ON INSIDE SURFACE WITH "TCCA-PDA, DART AEROSPACE LTD., P/N D3319-1 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA05-18" PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
- 7) WEIGHT: 0.90 lbs APPROX
- 8) SYMMETRY: ABOUT CENTERLINE

RELEASED
2012-03-16
PER ECN 12-946 R12.03.16

C	UPDATE TO CURRENT STANDARDS IAW QSI 043; CLOSED AFT MOST HOLE ON -3/5-7 (REF DETAIL G). SEE NCR12-547.	MB	12.03.13
B	WIDEN HOLES, REDUCE WIDTH ON -3/5-7	PH	05.06.06
A	NEW ISSUE	PH	04.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	PH		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.03.13		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D3319
SHEET 1 OF 4
TITLE WEARPLATE
SCALE NTS

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